Results
Sixty per cent of radiation oncologists at initiating center used the forms. From January 2016 to May 2018, 411 134 structured data were collected with a monthly median of 15 197 (811-24 015). The forms and tables were synchronized between two MOSAIQ® systems in different institution. Daily use was easy and produced 14 864 data between May and June 2018. Prospective evaluations were performed (dermatitis rate by physicians, by technique etc.). Post processing of data allowed development of algorithms that enabled early detection of unexpected toxicity patterns in patient populations.
Conclusion
Such massive production of data, integrated in daily care offers great opportunities for improvement of the quality of data and large scale of exploitation to produce levels of evidence from routine practice. Modeling of radiation treatment (tumor control and toxicity) and creation of more automatic alerts is ongoing. The concept and format used in MOSAIQ® OIS (Elekta) can be implemented in other software (OIS and hospital-based electronic patient charts). On October 2018, three other departments will integrate the structured medical record system.

EP-1663 REQUITE multicentre study of patients undergoing radiotherapy for breast, lung or prostate cancer
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Purpose or Objective
REQUITE aimed to establish a resource for multi-national validation of models and biomarkers that predict a patient's risk of late toxicity and quality-of-life following radiotherapy. The purpose here is to provide an overview of the data available.
Material and Methods
An international, prospective cohort study recruited patients in 26 hospitals in eight countries between April 2014 and March 2017. Target recruitment was 5,300 patients. Eligible patients had breast, lung or prostate cancer and planned potentially-curable radiotherapy. Radiotherapy was prescribed according to local regimens, but centres used standardised data collection forms including patient reported outcome measures available in multiple languages. Pre-treatment blood samples were collected. Patients were followed for a minimum of 12 (lung) or 24 (breast/prostate) months and summary descriptive statistics generated.
Results
Between 2014 and 2017, the study recruited 2,069 breast (98% of target), 1,808 prostate (86%) and 561 lung (51%) cancer patients. 383 lung cancer patients from external cohorts were included for genotyping. The centralised, accessible database includes: physician- (45,881 forms) and patient- (52,691) reported outcomes; 11,383 breast photos; 17,107 DICOM and 12,684 DVH files. Raw genotype data are available for 4,634 and imputed data for 4,304 patients with European ancestry (1,948 breast, 1,728 prostate, 628 lung) patients. Baseline demographics tended to vary per tumour site, e.g., the percentages of current smokers were 18% (365 breast patients), 14% (249 prostate) and 43% (227 lung). Respective figure for diabetes were 6% (126 breast), 7% (136 prostate) and 17% 92 lung); for heart disease 7% (143 breast), 21% (371 prostate) and 31% (166 lung); and for a BMI>30 kg/m^2 22% (454 breast), 23% (399 prostate) and 22% (118 lung). Radiation induced lymphocyte apoptosis (RILA) assay data are available for 1,290 patients. DNA (n=4,434 REQUITE patients) and Paxgene tubes (n=3,039) are stored in the centralised biobank. Example 2-year prevalences (1-year for lung) of ≥grade 3 toxicities are: 13% atrophy (breast), 26% dyspnea (lung), and 3% rectal bleeding (prostate).
Conclusion
The comprehensive centralised database and linked biobank is a valuable resource for the radiotherapy community for validating models and biomarkers that predict for risk of the late effects that most effect long-term quality-of-life. Most cancer patients gave consent to share their data and samples with external researchers, and a formal process for requesting data access for specific research questions is in operation (32 projects approved). A data discovery platform to search on numbers of patients with various attributes collected by the consortium is available at www.requite.eu.

EP-1664 Inter-fractional urinary bladder filling variation during IGRT in pelvic malignancies
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Purpose or Objective
Organ motion is an important factor that limits the precision of radiation treatment. Bladder filling variation has a significant impact on the position of target volumes in pelvic malignancies. One of the approach to reduce the bladder motion influence on the target location is by controlling the bladder volume, a protocol instructing the patient to drink a certain amount of water before starting the treatment. This study was an effort to maintain a consistent bladder volume after following a bladder protocol, which was then analyzed by in-room CBCT imaging. The bladder volumes and bladder wall dimension were Image-guided comprehensively thus adding considerable understanding to the bladder wall motions.
Material and Methods
This study was conducted on patients of pelvic malignancies excluding urinary bladder carcinoma. It was a single institution, non-randomised, prospective study and the duration of the study was of 6 months. All patients of pelvic malignancies undergoing IGRT (Image guided radiotherapy) with curative intent having urine holding capacity of at least half an hour were included in the study. In Bladder protocol patients were instructed to void the bladder 40 minutes prior to treatment and to drink 600 ml of water within 10 minutes. The patients were scanned after 30 minutes of taking the last glass of water. Time of